

AMENDMENTS TO THE CLAIMS

Claims 1-17 are pending in the instant application. Claims 1, 6 and 11 are independent. Claims 2-5, 7-10 and 12-17 depend from independent claims 1, 6 and 11, respectively. The Applicant requests reconsideration of the claims in view of the following amendments and remarks.

Listing of claims:

1. (Currently Amended) A method for equalization in a communications system, the method comprising:

removing post cursor inter-symbol interference (ISI) within at least one error correction code word in a block code based error correction scheme,

wherein said block code based error correction scheme utilizes a feed forward equalizer filter for filtering at least a feedback signal comprising information from said at least one error correction code word, and wherein said feedback signal comprises phase data.

2. (Previously Presented) The method of claim 1, wherein said removing of post cursor inter-symbol interference comprises removing symbol interferences from at least one previous error correction code word utilizing a decision feedback equalization filter.

3. (Previously Presented) The method of claim 2, wherein said removing of post cursor inter-symbol interference comprises utilizing distortion filtering in said decision feedback equalization filter, for generating filtered symbols.

4. (Previously Presented) The method of claim 3, wherein said utilizing of distortion filtering comprises inserting a matrix multiplication-based filter after a feed forward equalizer filter and a feedback filter in the communication system, for symbol interference from symbols in said at least one previous error correction code word.

5. (Previously Presented) The method of claim 3, wherein said removing of post cursor inter-symbol interference comprises adding scalar terms for each of said at least one error correction code word to a decision metric of a real part of a projection of said filtered symbols to said at least one error correction code word.

6. (Currently Amended) A system for equalization in a communications system, the system comprising:

- a modulation system utilizing a block code based error correction scheme; and
- a feedback equalization filter provided within said modulation system for removing post cursor inter-symbol interference (ISI) within at least one error correction code word to make at least one code word decision in said block code based error correction scheme, wherein said block code based error correction scheme utilizes a

feed forward equalizer filter for filtering at least a feedback signal comprising information from said at least one error correction code word, and wherein said feedback signal comprises phase data.

7. (Previously Presented) The system of claim 6, wherein said feedback equalization filter removes symbol interferences from at least one previous error correction code word.

8. (Previously Presented) The system of claim 7, wherein said feedback equalization filter comprises a distortion filter that generates filtered symbols.

9. (Previously Presented) The system of claim 8, wherein said distortion filter comprises a matrix multiplication-based filter inserted after a feed forward equalizer filter and a feedback filter for symbol interference from symbols in said at least one previous error correction code word.

10. (Previously Presented) The system of claim 8, comprising a decision metric for said feedback equalization filter, wherein scalar terms are added for each of said at least one error correction code word to a decision metric of a real part of a projection of said filtered symbols to said at least one error correction code word.

11. (Currently Amended) A method for equalization in a communications system, the method comprising:

performing block code based error correction during signal modulation in the communications system; and

making at least one code word decision with minimum error power-based criteria during said block code based error correction with a decision feedback equalization filter that removes post cursor inter-symbol interference (ISI) within at least one error correction code word, wherein said block code based error correction utilizes a feed forward equalizer filter for filtering at least a feedback signal comprising information from said at least one error correction code word, and wherein said feedback signal comprises phase data.

12. (Previously Presented) The method of claim 11, wherein said making of said at least one code word decision comprises utilizing said decision feedback equalization filter to remove symbol interference from at least one previous error correction code word.

13. (Previously Presented) The method of claim 12, wherein said making of said at least one code word decision comprises utilizing a distortion filter in said decision feedback equalization filter, for generating filtered symbols.

14. (Previously Presented) The method of claim 13, comprising inserting a matrix multiplication-based filter after a feed forward equalizer filter and a feedback filter for symbol interference from symbols in said at least one previous error correction code word for said distortion filter.

15. (Previously Presented) The method of claim 13, comprising utilizing a decision metric for said decision feedback equalization filter, wherein scalar terms are added for each error correction code word to a decision metric of a real part of a projection of said filtered symbols to said at least one error correction code word.

16. (Previously Presented) The method of claim 1, wherein said block code based error correction scheme is utilized in a modulation system of the communication system.

17. (Previously Presented) The method of claim 1, comprising:
selecting a code word for said block code based error correction scheme, based on said removing of post cursor inter-symbol interference within said at least one error correction code word.